WHAT IS CLAIMED IS:

1.   A method for generating an error signal, comprising the steps of:

accumulating sign information relating to phase differences in received

5   signals;

comparing the accumulated sign information against predetermined threshold levels; and

generating the error signal when at least one of the predetermined threshold levels is satisfied.

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2.   The method according to claim 1 wherein the error signal is generated in an automatic frequency control (AFC) loop in a Code Division Multiple Access (CDMA) system.

15   3.   The method according to claim 2, further comprising the steps of:

multiplying a current despread pilot signal with a complex conjugate of a previous despread pilot signal; and

obtaining a sign value of a product of said multiplying step.

20   4.   The method according to claim 3, wherein said step of obtaining a sign value comprises the step of extracting the sign value of an imaginary part of the product of said multiplying step.

5.   The method according to claim 1, wherein said predetermined

25   threshold levels include a positive threshold and a negative threshold.

6.   The method according to claim 5, wherein said generating step comprises the steps of generating a positive constant error signal when the positive threshold is satisfied, and generating a negative constant error signal

5   when the negative threshold level is satisfied.

7.   The method according to claim 6, wherein the positive constant error signal and the negative constant error signal are used to control a gain of an AFC loop.

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8.   The method according to claim 1, further comprising the step of utilizing values of the error signal to control a gain in an AFC loop.

9.   The method according to claim 8, wherein the values of the error

15   signals are constant values capable of being adjusted to control the gain in the AFC loop.

10.   The method according to claim 1, further comprising the step of utilizing the predetermined threshold levels to affect a bandwidth of an AFC

20   loop.

11.   The method according to claim 1, further comprising the step of resetting the accumulated sign information when the error signal is generated.

12.   A method for generating an error signal for an automatic frequency control (AFC) loop in a Code Division Multiple Access (CDMA) system, comprising the steps of:

accumulating sign information relating to phase differences in received

5   pilot signals;

decimating the accumulated sign information; and

utilizing an output of said decimating step as the error signal for the AFC

loop.

10   13.   The method according to claim 12, further comprising the steps

of:

multiplying a current despread pilot signal with a complex conjugate of a previous despread pilot signal; and

obtaining a sign value of a product of said multiplying step.

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14.   The method according to claim 13, wherein said step of obtaining the sign value comprises the step of extracting the sign value of an imaginary part of the product of said multiplying step.

20   15.   The method according to claim 12, wherein the output of said decimating step is utilized as the loop error signal upon a decimation of a threshold number of the samples.

16.   The method according to claim 15, further comprising the step of resetting the output of said decimating step at a same interval as when the output of said decimating step is utilized as the loop error signal.

5   17:   An apparatus for generating an error signal, comprising:

an accumulator for accumulating sign information relating to phase differences in received pilot signals;

a comparator for thresholding the accumulated sign information against adaptable threshold levels; and

10   an error signal generator for generating the error signal when at least one of the adaptable threshold levels is satisfied.

18.   The apparatus according to claim 17, wherein said error signal generator generates a positive constant error signal when the positive

15   threshold is satisfied, and generates a negative constant error signal when the negative threshold level is satisfied.

19.   The apparatus according to claim 18, wherein the positive constant error signal and the negative constant error signal are used to control

20   a gain of an AFC loop.

20.   An apparatus for generating an error signal for an automatic frequency control (AFC) loop in a Code Division Multiple Access (CDMA)

25   system, comprising:

an accumulator for accumulating sign information relating to phase differences in received pilot signals;

a decimator for decimating the accumulated sign information so as to output the error signal therefrom.

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21.   The apparatus according to claim 20, wherein the output of said decimator is utilized as the error signal upon a decimation of a threshold number of the samples.

10   22.   The apparatus according to claim 21, wherein the output of said decimator is reset at a same interval as when the output of said decimator is utilized as the error signal.